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APR 76 J S BREMER, M E MILLER MDA930-75-C-0225
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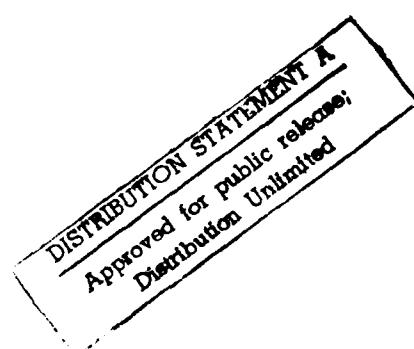
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Technical Report No. 298

ANALYSIS AND EVALUATION OF POTENTIAL
COMPETITION OF INTEREST AMONG THE
MAJOR POWERS

Volume IV. Significance of Soviet
Maritime Behavior in the Third
World--Some Empirical Evidence.

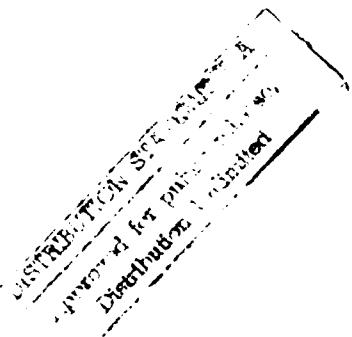
by

J. S. Breemer and M. E. Miller

30 April 1976

Prepared for
Director, Special Regional Programs
Office of the Assistant Secretary
of Defense
(Program Analysis and Evaluation)
Under
Contract No. MDA 930-75-C-0225

2361 South Jefferson Davis Highway
Arlington, Virginia 22202



UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Analysis and Evaluation of Potential Competition of Interests Among the Major Powers, Vol. IV: Significance of Soviet Maritime Behavior in the Third World-Some Empirical Evidence		5. TYPE OF REPORT & PERIOD COVERED Final Technical Report
7. AUTHOR(s) J. S. Breemer and M. E. Miller		6. PERFORMING ORG. REPORT NUMBER 298
9. PERFORMING ORGANIZATION NAME AND ADDRESS Presearch Incorporated 2361 So. Jefferson Davis Highway Arlington, Va. 22202		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Director, Special Regional Studies, Asst. Secretary of Defense (Program Analysis and Evaluation) Rm. 2D321, The Pentagon, Wash., D.C.		12. REPORT DATE 30 April 1976
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Same		13. NUMBER OF PAGES 50
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) This document has been approved for public release; its distribution is unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES This is Volume IV of 4 Volumes A version of this report was presented at the 1976 Conference of the International Studies Association/West, San Francisco, Ca. on 27 February 1976.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Deterrence; External Involvement; Naval Presence; Pearson Correlation; Port Visits; Soviet Navy; Soviet Merchant Marine.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Four years (1970-1973) of quantitative data on Soviet overseas Naval and Merchant Marine port visits were correlated with data on Soviet trade, economic and military assistance to examine the role of Soviet Maritime behavior within the overall framework of Soviet external involvement. Naval presence appears to be an important Soviet Naval role in the Middle East and West Africa-not in the Indian Ocean.		

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SUMMARY

BACKGROUND

1. This is the Volume IV of the final technical report to a study entitled Analysis and Evaluation of Potential Competition of Interest Among the Major Powers. The study was performed for the Office of the Assistant Secretary of Defense (Program Analysis and Evaluation), Director, Special Regional Programs, under Contract No. MDA 930-75-C-0225.
2. This volume applies empirical information to a study of the role of Soviet maritime forces within the framework of Soviet policies and interests in the developing nations. The source data for the study are contained in the World Analytic Research Project (WARP) data base that has been developed in support of the overall study.
3. Four years (1970-1973) of empirical data on the frequency of Soviet naval and merchant marine port visits are correlated against eight measurable manifestations of Soviet external involvement. These manifestations include exports, imports, development assistance, security assistance, arms sales, deployments of technical advisers, military deployments, and educational exchanges.

PURPOSE

4. The overall objective of the present study was to see if the use of empirical data and statistical research techniques clarified the role of Soviet maritime behavior within the general framework of Soviet foreign policies in the Third World. Two discrete research objectives guided the study. First, the study data and methodology were to be used to investigate the Soviet use of naval forces as an instrument of external presence in different geographic areas of the world. Secondly, the study was to test the prevailing thesis that, as a general rule, the Soviet Union does not use naval power to protect its merchant marine traffic.

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SCOPE

5. The study was undertaken to demonstrate the usefulness of aggregate data research in enhancing the policy analyst's insight into complex and frequently intangible international political problems. This report was not designed to be an exhaustive treatment of Soviet naval roles and missions. Instead, the data and its application were deliberately limited in the hope that the results would be sufficiently thought-provoking to stimulate further questioning and research.

FINDINGS AND CONCLUSIONS

6. On a worldwide basis, it was concluded that the geographic pattern of Soviet merchant marine activity is strongly related to foreign commodity trade, arms shipments, and the delivery of economic assistance. Also, on an aggregate worldwide basis, no appreciable association was found to exist between the geographic distributions of Soviet naval port calls and merchant marine visits, thereby empirically affirming the reputed lack of a sustained Soviet interest in sea control, i.e., the use of naval forces to protect merchant shipping.

7. Separate regional analyses indicated that, as additional naval capabilities become available, the Soviet navy may forge a closer protective link with the merchant marine. This conclusion was based on the strong, positive correlation that was found to exist between Soviet merchant marine and naval port visits in the Middle East-North African region.

8. Naval presence, i.e., the use of naval forces to confirm commitment to a friendly nation, appears to be one of the main missions of the Soviet navy in the Middle East and along the west African coast. This conclusion is based on the strong positive association in those two areas between the frequency and destination of Soviet naval port visits and the flow of Soviet arms sales and security assistance.

9. Along the Indian Ocean littoral, no discernible relationship was found between (a) the pattern of Soviet naval port calls and (b) the allocation of merchant marine activities and flow of Soviet arms transfers. This finding is believed to weaken the argument that Soviet naval strength in the Indian Ocean is used systematically to underwrite Moscow's commitment to its regional clients. However, it supports the assertion that Soviet naval behavior in the area is essentially reactive (or preemptive) to U.S. fleet movements

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rather than being a deliberate policy design. Furthermore, the apparent lack of design in Soviet Indian Ocean fleet activities suggests that this may be the opportune moment to arrive at a mutually agreed on, U.S.-Soviet arms control formula in the region. As Soviet logistical capabilities improve, the opportunity may vanish.

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I. INTRODUCTION

GENERAL

1.1 This report is Volume IV of the final technical report to a study entitled Analysis and Evaluation of Potential Competition of Interest Among the Major Powers. This study was performed for the Assistant Secretary of Defense (Program Analysis and Evaluation), Director, Special Regional Programs, under Contract No. MDA 930-75-C-0225.

BACKGROUND

1.2 This report examines some basic statistical evidence of Soviet naval and merchant maritime behavior in an effort to clarify its role in Soviet foreign policy toward the developing nations. Most U.S. policy analysts agree that Soviet naval and merchant marine deployments should be understood and interpreted within the overall framework of Soviet foreign policy. Observers are uncertain, however, about the precise nature of the linkage between, for example, Soviet naval activity in the Third World and Moscow's military and development aid programs. What is the chronological relationship between the delivery of Soviet weapons and the frequency of Soviet naval port calls? Does the Soviet navy tend to establish the initial political foundation for an arms relationship, or is the provision of military equipment used to

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acquire friendly ports of call? Another related question is whether it can be demonstrated empirically that the Soviets have begun to use their navy in a "presence" role, i.e., in the out-of-area deployment of naval combatants in support of allies and client states.

1.3 Most analysts agree that Soviet naval and merchant marine policies are two closely integrated activities, with merchant vessels serving functions (e.g., refueling at sea or intelligence collection) that, in the West, are normally reserved for the military services. Consensus in Western naval circles also appears to be that the Soviet naval-merchant marine nexus does not include the systematic protection of Russian seaborne trade--one of the traditional missions of Western navies. The comparatively small size of Soviet overseas trade is claimed as the main reason for this apparent lack of Soviet interest in patrolling its merchant sea-lanes.

1.4 The role of Soviet maritime behavior within the overall framework of Soviet influence-seeking activities in the Third World is the topic of this report. In particular, 10 measurable criteria of Soviet external involvement during the years 1970 through 1973 have been analyzed in an effort to discover what systematic coupling exists between Soviet worldwide naval and merchant marine activities and the pattern of Soviet aid and trade.

PURPOSE

1.5 A major objective of the overall study was to construct a comprehensive data base that allows the defense analyst to test propositions or generate new hypotheses on important

international security issues. The purpose of this volume is to demonstrate the applicability of the empirical information contained in the World Analytic Research Project (WARP) data base to the systematic analysis of Soviet maritime behavior as an instrument of Soviet foreign policy.

1.6 Two major policy questions guided the research presented in this volume: (a) the Soviet use of naval strength as an instrument of "presence" and (b) the relationship between Soviet naval movements and the geographic distribution of the Soviet Union's extensive merchant marine fleet.

SCOPE

1.7 The methodological thrust of the analysis is experimental; no previous effort (to the study team's knowledge) has been made to apply statistical routines to broaden the understanding of the maritime "link" in Soviet foreign policy. It must be stressed that the use of quantitative research techniques to study social relationships is to be viewed as a supportive tool. Statistical findings alone cannot replace the sound judgment of the professional military analyst. Where the statistical results are clearly at odds with expert opinion, the burden of proof should rest with the statistician. Naturally, if 90% of the statistical findings confirmed accepted judgment and the remaining 10% contradicted conventional wisdom, there would be a strong incentive to at least question accepted judgment.

CONTENTS

1.8 Section II contains a synopsis of the current Western estimate of Soviet maritime roles and missions in the broad

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context of Soviet foreign policy. Section III outlines the particular research problems that have been addressed, while Section IV presents the study's statistical findings, their substantive interpretation, and their implications for U.S. defense policy.

II. GENERAL OBSERVATIONS ON SOVIET MARITIME BEHAVIOR

GENERAL

2.1 This section summarizes prevailing Western thought on the role of the Soviet Navy and merchant marine in the context of Soviet foreign policy.

2.2 The Soviet navy has become a major concern for U.S. defense planners. Its surface component, in particular, which historically has been designed primarily to support Soviet theater strategy on land, has been deployed increasingly out-of-area.

2.3 Beginning in 1964, Soviet surface naval forces became a regular feature in the Mediterranean Basin, at times numbering as many as 90 units simultaneously. Similarly, the Indian Ocean, the Caribbean Sea, and the shipping lanes off the west coast of Africa have witnessed a growing number of Soviet surface naval visits.

2.4 The widening network of Soviet naval deployments appears to have paralleled the important shift in the pattern of general Soviet external involvement that occurred in the 1960s and 1970s. Whereas Soviet foreign commitments during the first 10 to 15 years after World War II were focused primarily and most consistently on the countries on the immediate Soviet periphery (e.g., Afghanistan, Eastern Europe, Finland) in

an effort to secure a ring of buffer states against the U.S.-sponsored alliance system, the Soviet Union of the 1960s and 1970s has increasingly been prepared to involve itself extensively outside the Eurasian land mass. Evidently, the growth of Soviet power relative to that of the U.S., the fractionation of the Western alliance system, and the Western desire to reduce tensions helped to convince Moscow of the relative safety of its land borders and, consequently, of the feasibility of diverting more resources at less risk to extend Soviet influence outside Eurasia. Long-term commitments in the Middle East, South Asia, and Cuba have occurred accordingly.

2.5 The extension of Soviet surface naval activities concomitant with expanding Soviet interests and involvements outside Russia's traditional sphere of influence has led concerned observers to seriously ponder the eventual employment of Soviet naval power for out-of-area unilateral intervention to shore up friendly regimes or to protect local interests, much in the same way that the U.S. has used its Sixth Fleet in the Mediterranean Sea. T. B. Millar, an Australian writer on international military affairs, warned in an article written in 1969:

The size and continuing growth of the Soviet Navy enables the Russians to have an important tactical presence wherever their interests require it, giving psychological support to diplomacy and providing opportunities for intervention or pressure in crisis areas anywhere, but in particular where Western navies do not or will not operate in strength...the Soviet Union has--today--a capacity for intervention she has never before possessed. 1/

1/ T. B. Millar, "The Indian and Pacific Oceans," Adelphi Papers (London), No. 57, May 1969, p. 4.

2.6 A more sober view of Soviet overseas intervention capabilities--and one that appears to be subscribed to by most civilian analysts within the Department of Defense--holds that the Soviet Union still lacks the kind of amphibious warfare capability that is necessary to stage a successful intervention against all but the most primitive adversary. Instead, the Soviet Union may be using generous doses of military and economic assistance to create a friendly local environment, where, if required, the landing of Soviet forces--ostensibly to support the regime in power--will be unopposed. According to one writer on Soviet naval affairs:

Although the Russians have used their Navy to create the image of a protector of sea frontiers of troubled countries, there has been a noticeable lack of force development which would support these countries with an over-the-beach assault by airborne troops launched from an amphibious carrier. It would appear that the Russians have opted for a different strategy, especially for those countries in which they have a deep military, economic, or political interest. In these cases, the Russians apparently plan on becoming, in peacetime, so deeply entrenched in a designated country that a beachhead will already have been established should a situation arise which would be unfavorable to the local government in power. Should a situation then arise which would require the use of military force, the Navy would attempt to repulse any attack from the sea much in the same manner it hopes to defend the shores of the U.S.S.R. 2/

2.7 In any event, the Soviet use of sea power to intervene directly in the Third World would be a highly dramatic change

2/ John T. Funkhouser, "Soviet Carrier Strategy," U.S. Naval Institute Proceedings, December 1973, p. 36.

from the Soviet navy's traditional roles and missions, which, as Secretary of Defense Schlesinger explained in his Annual Defense Department Report for Fiscal Year 1976, "at least for now, [stress] defense against U.S. power projection efforts and interdiction of U.S. and allied military and economic support shipping on the open oceans." 3/

"PRESENCE" ROLE OF THE SOVIET NAVY

2.8 "Presence," according to U.S. naval authorities, has become one of the principal peacetime missions of the Soviet navy. Naval presence is the mid-twentieth century euphemism for nineteenth century gunboat diplomacy. According to Barry M. Blechman of The Brookings Institution:

The mere presence of a naval force in a region serves a political function, regardless of its composition, its missions, or its activity, and even in the absence of any diplomatic activity directed toward similar ends. The existence of the force automatically causes the states of the region to weigh a new factor in their calculation of the balance of power and in their expectations of the probable behavior of other states in various contingencies. As such, a state that establishes a peacetime naval presence in a specific region is apt to gain influence in the affairs of that region. 4/

2.9 Naval presence, according to defense analyst Edward N. Lutwakk, exercises a dual suasive function: deterrence and support. In its deterrence mode, the resort to military

3/ Secretary of Defense James R. Schlesinger, Annual Defense Department Report for FY 1976, Washington, D.C., Government Printing Office, 1975, pp. 1-20.

4/ Barry M. Blechman, The Changing Soviet Navy, Washington, D.C., The Brookings Institution, 1973, p. 20.

force that is implicit in the routine deployment of naval power is directed against potential adversaries. In its complementary, supportive mode, naval presence is used as a reminder to allies and clients of the deploying naval power of the military capabilities that can be brought to their aid. ^{5/} Most often, of course, the deterrence and support functions are effected simultaneously.

2.10 Soviet writings have indicated an acute appreciation of the deterrence-supportive role of naval presence. Admiral Gorshkov, the Soviet Commander-in-Chief, declared in the summer of 1970:

Ships of the Soviet Navy are systematically present in the ocean, including the areas of the presence of shock navies of NATO. The presence of our ships binds the hands of the imperialists, deprives them of a possibility to interfere unhindered into internal affairs of peoples. ^{6/}

2.11 Later, in a series of essays translated under the title Navies in War and Peace, he wrote:

Official visits and business calls of the warships of the Navy are making a significant contribution to improving mutual relations between states and peoples and to strengthening the international influence of the Soviet Union.... ^{7/}

^{5/} Edward N. Lutwakk, The Political Uses of Sea Power, Baltimore, The Johns Hopkins University Press, 1974, pp. 11-17.

^{6/} Tass, International Service, 25 July 1970. Reprinted in Foreign Broadcast Information Service, Daily Report: Soviet Union, 27 July 1970, pp. E-1.

^{7/} The Gorshkov writings appeared in monthly installments in the U.S. Naval Institute Proceedings, January-November 1974.

2.12 The use by the Soviet Union of its naval power to demonstrate to friends and adversaries its ability and, however implicitly, its willingness to use military force in support of distant client states would constitute another significant departure from earlier Soviet naval roles. It would signify that the Soviet Union had ceased to perceive and use its navy almost exclusively as an instrument in support of the Soviet homeland proper, and that, instead, deployed naval power has become an integral part of the Soviet effort to extend and secure Russia's growing stake far beyond the national boundaries. Soviet naval movements in the Eastern Mediterranean during the 1967 and 1973 Arab-Israeli wars and, more recently, the dispatch of a Kotlin-class guided missile destroyer off the coast of Angola seem to confirm the view that the Soviet Union is now prepared to at least imply the use of military force to defend its overseas interest against potential intervening powers.

2.13 The demonstrative deployment of the Soviet navy in support of countries of interest intimates another highly significant substantive shift in Soviet policy toward the developing portion of the world. The direct involvement--although only by implication so far--of Soviet military power in support of areas of influence suggests that Moscow no longer perceives its involvement in Third World countries as a largely opportunistic activity. Instead, the extension of Soviet influence in Africa, the Middle East, or Asia has become a serious and deliberate policy objective, which, once accomplished, will be safeguarded with the appropriate military tools available.

2.14 The precise sequential relationship that may exist between the expansion of the Soviet surface fleet and the growth of Soviet external commitments is unclear and, in fact, may not be very important. It has long been acknowledged that the relationship between capabilities and intentions in a nation's foreign policy is simply too complex to allow a definitive statement of cause and effect. At the same time, given a de facto relationship (as is presently proposed to exist), the U.S. and its Western allies are faced with the prospect of a proliferating pattern of Soviet influence-seeking as long as the present momentum in Soviet naval construction continues. Thus, as the Soviet Union improves its ability to maintain naval forces over greater distances, it will probably expand its efforts to extend and maintain political footholds in areas that are now substantially out of reach, e.g., Latin America.

SOVIET NAVAL-MERCHANT MARINE CONNECTION

2.15 The quantitative and geographic expansion of the Soviet navy has been paralleled by the extraordinary growth of the country's merchant marine. Presently larger than its U.S. counterpart, in 1974 the Soviet dry cargo merchant fleet was reported to number about 2,300 ships with a carrying capacity of roughly 16.8 million long tons (17.1 million metric tons), compared to 580 U.S. ships with a capacity of 13.8 million long tons (14.0 million metric tons). ^{8/} Post-World War II Soviet merchant marine activity, initially limited primarily to coastwise transportation, has expanded to virtually every

^{8/} Norman Polmar, "Is the USSR Behind or Ahead?" Sea Lift, Vol. 25, No. 1, 1975.

port around the globe. The expanding Soviet economy and the growing Soviet participation in the international market place as a result are generally regarded as the prime reasons for the growth of the Soviet merchant marine. ^{9/}

.16 Western analysts of Soviet maritime affairs agree that the Soviet navy and merchant marine are two highly complementary tools in Moscow's drive for growing influence on the world's oceans. According to Admiral Moorer, the former U.S. Chief of Naval Operations:

The elements (of Soviet sea power) are so thoroughly integrated as to present a single structure. For all intents and purposes they are all a part of the Soviet Navy and can so operate to the levels of greatest efficiency for the state. 10/

Accordingly, it is a common Soviet practice to use merchant ships to provide logistic support for the navy, including refueling on a regular basis in both coastal and remote ocean areas. Also, intelligence collection in foreign ports is thought to be a routine aspect of visiting Soviet merchant ships.

.17 Unlike the Western seagoing nations, protection of commercial shipping is not believed to be a primary mission of the Soviet navy. Thus, Secretary of Defense Schlesinger's

^{9/} See, for example, the report prepared by the Library of Congress for Senator Warren G. Magnus, Chairman of the Committee on Commerce, entitled The Soviet Drive for Maritime Power, 90th Congress, 1st Session, Washington, D.C., Government Printing Office, 1967, p. 5.

^{10/} From a speech before the Defense Orientation Conference Association, September 1968. Cited in David Fairhall, Russian Sea Power, Boston, Gambit, Inc., 1971, p. 205.

evaluation of the U.S.-Soviet maritime balance in his final Annual Defense Department Report stressed the basic asymmetry between the U.S.-Allied "sea control" mission and the Soviet emphasis on "interdiction" capabilities. The reason for this distinction, he explained, was the following:

The United States and most of its principal allies depend fundamentally on use of the seas for their trade and commerce in peacetime and for their lines of communication in war....The USSR and its allies currently do not. 11/

The apparent dichotomy between the Soviet Union's very large merchant fleet and its minor dependence on overseas commerce has been explained as follows by John E. Moore in his foreword to the 1975-1976 edition of Jane's Fighting Ships:

...the fact that the U.S.S.R. is only marginally behind the U.S.A. in carrying capacity (deadweight tons) does not mean that the Soviets are equally dependent on foreign trade for survival. With national self-sufficiency in all but a few of the major raw materials, this fleet of ships is probably intended as a means of earning foreign currency. 12/

Mr. Moore's conclusion that the Soviet Union's relative independence from overseas trade and raw resources does not justify the size of its present-day navy is at the core of the predominant U.S. perception of the Soviet fleet as

11/ Schlesinger, op. cit., pp. I-20.

12/ John E. Moore, ed., Jane's Fighting Ships, 1975-76, London, Macdonald and Co., Ltd., 1975, p. 91.

primarily an offensive weapon. Some basic statistical evidence indicates, however, that the accepted Western depreciation of the economic role of the Soviet merchant fleet and, therefore, of the Soviet "need" for a navy, may be debatable.

2.18 It is not altogether clear why the currency-earning role of the Soviet merchant marine should necessarily be less of a reason for the latter's protection by a navy, than, for example, the safe movement of consumer goods, which comprise the bulk of U.S. seaborne imports. The earning of hard foreign currencies by moving cargoes on Soviet instead of foreign flag vessels is recognized as perhaps the principal contribution of the Soviet merchant marine to Russia's economy. Moreover, this particular role is probably significantly more important to the Soviet Union than to the Western seafaring nations. Robert E. Athay, a researcher with the Center for Naval Analyses, has explained why:

The economic gains to the Soviet Union from its merchant-shipping program may be evaluated primarily in terms of the net impact on the balance of payments of substituting domestic ships for foreign ships in carrying the country's foreign trade....The Soviets have suffered in recent years from a persistent inability to market sufficient exports in hard-currency countries of the West to pay for imports from these countries. The deficits in its hard-currency trade accounts have placed a heavy strain on Soviet gold reserves. Hard-currency earnings by the merchant fleet, therefore, are of special significance to the Soviets. Net earnings of the magnitude estimated would have been sufficient to offset a significant portion of the Soviet deficit arising

from commodity trade with the West in the period 1964-66. 13/

In brief, the Soviet Union is quite dependent on its merchant fleet to limit the depletion of its hard-currency reserves, which it needs to pay for the importation of Western commodities, ranging from U.S. wheat to high-technology items.

2.19 A few basic statistics on U.S. versus Soviet imports show that while the Soviet Union may indeed procure few of its vital raw materials from overseas (although its repeated large grain purchases would seem to contradict this), the U.S., too, relies on relatively few imported "strategic" materials. According to a report by the President's Council on International Economic Policy, "on an overall basis, U.S. import dependence on critical...industrial materials is modest--about 15% of our consumption." 14/ Moreover, according to the report, approximately one-half of the aggregate volume of imported critical materials came from Canada, i.e., overland. It is worthwhile to note that a number of imported raw materials that are on the "strategic list" (e.g., copper) are, in fact, abundantly available in the U.S. but are imported for further processing and reexport.

2.20 The fraction of shipping space that is accounted for by U.S. imported critical materials is evident in that of

13/ Robert E. Athay, The Economics of Soviet Merchant-Shipping Policy, Chapel Hill, N.C., The University of North Carolina Press, 1971, pp. 109-111.

14/ Council on International Economic Policy, Special Report--Critical Imported Materials, Washington, D.C., Government Printing Office, December 1974, p. 4.

the total U.S. seaborne trade of almost 500 million short tons (approximately 433 million metric tons) in 1969, slightly over 57 million short tons (or almost 52 million metric tons) included 22 critical raw materials, or almost 12% ^{15/} of total U.S. seaborne trade. Exclusion of iron ore and copper (plentiful reserves of which are available in the U.S. to more than meet domestic needs) would reduce the 1969 tonnage figure for imported critical materials from 57 to almost 35 million short tons (52 to 32 million metric tons), or to 7.7% of the total volume of U.S. seaborne trade in that year.

2.21 The bulk of U.S. seaborne trade, therefore, involves nonessential raw materials and manufactured goods, many of which could, in fact, be eliminated or produced domestically but are imported either because they add to everyday convenience or because they are cheaper overseas. If the Soviet navy cannot be "explained" by a Soviet dependence on overseas critical materials, then the same condition appears to be equally valid for the U.S.

2.22 An alternative way of examining the relative importance of U.S. and Soviet seaborne trade is by comparing that portion of overall foreign trade that is transported by sea and to relate those figures to respective gross national products (GNPs). In 1972, total U.S. seaborne trade involved 607 million

^{15/} The materials considered included: antimony, asbestos, bauxite, beryl, chromite, cobalt, columbite, tantalite, copper, fibers, iron ore, lead, manganese, nickel, rubber, thorium, tin, titanium, tungsten, uranium, zinc, and zircon. Office of Naval Operations, U.S. Life Lines, Washington, D.C., Department of the Navy, June 1971.

short tons (551 million metric tons), with a total price tag of \$57 billion, or \$93.90 per short ton. The value of all U.S. imports plus exports in 1972 was \$104 billion, signifying that 52.6% of U.S. trade arrived or departed by sea.

2.23 Soviet seaborne trade in 1972 included a total of 153 million short tons (139 million metric tons). Since no monetary values are available for the seaborne portion of the Soviet Union's international commerce, it has been assumed that the average dollar value per short ton loaded or unloaded is the same as in the U.S., i.e., \$93.90. On this premise, the value of Soviet seaborne imports and exports in 1972 was 153 million multiplied by \$93.90, which equals \$14.4 billion, or 45.9% ^{16/} of the Soviet Union's total trade of \$31.4 billion in that year.

2.24 In relation to the two nations' respective GNPs in 1972, the U.S. seaborne trade of \$57 billion made up 4.7% of a total U.S. GNP of \$1,223 billion. The comparable Soviet figure was 2.3%, for a GNP of \$614 billion. ^{17/}

^{16/} The 45.9% figure is reasonably close to a 1966 figure of 49.0% cited by Robert E. Athay in The Economics of Soviet Merchant-Shipping Policy, Chapel Hill, N.C., The University of North Carolina Press, 1971, p. 131.

^{17/} Sources for U.S. and Soviet trade data included: United Nations, Statistical Yearbook 1974, New York, 1975; U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the U.S.: 1975, Washington, D.C., Government Printing Office, 1975; U.S. Department of Commerce, Maritime Administration, Marad 1973--The Annual Report of the Maritime Administration for Fiscal Year 1973, Washington, D.C., Government Printing Office, April 1974.

2.25 The principal conclusion drawn from the preceding calculations is that although the U.S. is indeed more dependent on seaborne commerce than the Soviet Union (in both absolute as well as relative terms), the direct contribution of international seaborne commerce to both nations' GNPs is, in fact, minor. ^{18/} Moreover, the evidence indicates that seaborne transportation plays an approximately equal role in both countries' overall international trade.

2.26 In the final analysis, whether or not a nation's merchant fleet is vital to its economy may not be the relevant criterion that "justifies" the possession of a navy. Merchant ships are a de jure extension of the nation's territorial integrity and sovereignty and, as such, have a claim on the nation's protective power. Thus, the U.S. dispatched its Marines, warships, and aircraft to recapture the SS Mayaguez, not because it carried vital raw materials, but because it represented a piece of U.S. territory.

2.27 If the Soviet Union's independence from overseas trade alone does not suffice to explain its supposed failure to implement a strategy of sea control, a number of additional motivations might be considered. First, the Soviet leadership may be reasonably confident that the U.S. will not be the aggressor and that, therefore, the Soviets do not require armed protection for its merchantmen. Secondly, the expansion of Soviet seaborne trade may simply have outrun the country's present material ability or the doctrinal expertise required

^{18/} It has been assumed that the job and service-creating contribution of seaborne trade to the GNP is roughly equal for the U.S. and the Soviet Union.

to develop an effective sea control posture. Finally, the Soviets may simply have decided that the loss of merchant ships at sea in time of war is not worth the extra cost of building the additional naval tonnage necessary to implement an effective sea control strategy. Instead, the Kremlin could have resolved to trade off sea control for additional antisubmarine warfare (ASW) capabilities or surface launch ballistic missile (SLBM) forces.

2.28 The question still remains whether a continued expansion and consolidation of the Soviet Union's extra-European commitments and a growing dependence on overseas resources and exports will not heighten the Soviet interest in the naval protection of its maritime lanes. ^{19/} Although most Western analysts of Soviet naval matters have stressed a "spoiling" role (i.e., the interruption of the Western sea transport routes) as the primary mission of the Soviet navy (and ample Soviet statements tend to support this view), it would be highly unusual if the Soviet navy were not to adopt some form of sea control doctrine eventually. In this regard, it is worthwhile to recall that until recently, the Soviet naval posture has been typical of the weaker power at sea. Even today, the Soviet Union finds itself in the same relatively inferior naval position vis-a-vis the U.S. as Germany did relative to Great Britain in World Wars I and II and as France

^{19/} A number of Soviet economic planners have urged that the Soviet Union take advantage of cheap labor in the developing countries through investment in so-called "mixed companies" and through a closer coordination between economic aid and trade advantage. See, for example, Elizabeth K. Valkenier, "New Trends in Soviet Relations With the Third World," World Politics, Vol. 22, No. 3, April 1970.

did in relation to Great Britain around the turn of the twentieth century. Like Germany and France before her, the Soviet Union decided to make up for its relative inferiority by building large numbers of comparatively cheap attack submarines. The Soviet conventional attack submarine fleet reached its greatest numerical strength in the 1950s--prior to the explosion in merchant marine construction.

2.29 It can be demonstrated historically that once a country possesses a large merchant fleet, its protection tends to become a "self-evident" requirement, and that, as merchant marine tonnage grows, so will naval budgets. For the Soviet Union to permanently disavow the use of naval power explicitly to protect its merchant shipping routes would be a unique break with historical experience. Instead, it is more reasonable that some initially primitive form of local sea control will be the next, logical step in the progression of Soviet sea power from a de facto adjunct to land operations to an extensive out-of-area interdiction and presence.

2.30 Certainly, the desirability of better protection must have become apparent to the Soviet leadership with the growing frequency of foreign seizures of Soviet merchant ships (Morocco's detention of a Russian cargo ship off the coast of Spanish Sahara in January 1976 is the latest example) and the potential for confrontation with foreign navies as Moscow pursues its aggressive fishing policies in a world that is becoming increasingly conscious of the importance of ocean resources. The data used in this report has been applied in an effort to illuminate a possible trend toward a closer alignment between Soviet sea trading routes and naval deployments.

III. RESEARCH FOCUS

GENERAL

3.1 This section outlines the specific research problems that have been addressed in this report. The first problem is whether the observed pattern of Soviet maritime activity in the Third World relates in a discernible way to the more familiar, or "traditional," manifestations of Soviet involvement and commitment in the developing countries. The second issue is whether some basic statistical measures of Soviet naval behavior can be used to further illuminate the apparent lack of deliberate coordination between Soviet merchant shipping and naval protection.

3.2 The second issue has been treated in detail previously. However, it is desirable to clarify the two dominant Western estimates of the relationship between Soviet naval expansion and Soviet external policy objectives.

SOVIET NAVAL EXPANSION AND SOVIET POLICY OBJECTIVES

3.3 Most Western observers of Soviet naval affairs contend that Soviet out-of-area naval activity has been essentially initiative, i.e., it has been designed to implement and to support specific Soviet interests and commitments that are

quite independent from U.S. and Western naval behavior. Rear Admiral Frederick J. Harlfinger II, the Assistant Chief of Naval Operations for Intelligence, told the following to a Pentagon audience a few years ago:

...it seems appropriate to emphasize a fundamental characteristic of Soviet (naval) initiatives. These initiatives are designed to provide fundamental support to Soviet interests and are not necessarily designed to counter Western initiatives. Competition with the West is only a by-product of these Soviet programs--competition which they readily accept--but which is incidental, nonetheless. 1/

3.4 Barry M. Blechman of The Brookings Institution has endorsed Admiral Harlfinger's estimate:

The U.S. and Soviet Navies each support national interests that have little to do with superpower rivalry. In fact, mutual competition often distorts these countries' views of national interest and can, consequently, waste both nations' resources or be needlessly risky, maybe acting as a catalyst for major conflict. 2/

3.5 The reactive or competitive character of recent Soviet naval deployments has also been stressed. Speaking of the

1/ Rear Admiral Frederick J. Harlfinger II, USN, "Total Implications of Soviet Seapower," unclassified version of briefing to Pentagon symposium, Washington, D.C., 25 March 1970.

2/ Barry M. Blechman, The Control of Naval Armaments: Prospects and Possibilities, Washington, D.C., The Brookings Institution, 1975, p. 3.

Soviet naval presence in the Indian Ocean, the former director of the CIA, William E. Colby, told Senator Taft in 1974:

I think that our assessment, Senator, is that you will see a gradual increase in Soviet presence in the Indian Ocean area, that if there is some particular American increase, that the Soviets will increase that gradually to match any substantial additional American involvement. So that it would really depend upon the size of the investment and the forces that we arrange to be there. If we put in a permanent establishment of some size, why they would correspondingly increase to some substantial degree. 3/

3.6 The issue of whether Soviet naval behavior has been mainly initiative or competitive (i.e., supportive of discrete Soviet interests) or simply responsive to prior, or expected, U.S. naval initiatives is important from the perspective of naval arms control. If the Soviet leadership views and uses its navy primarily as the optimum way to further certain discrete Soviet interests and not to counterbalance U.S. naval moves, it is likely to have little incentive to reconsider its original evaluation, since, by agreeing to some form of arms control, it would be bound to seek alternative (and probably more costly) ways of promoting Soviet objectives. If, on the other hand, the main reason for a Soviet naval presence

3/ Testimony on 11 July 1974 before the U.S. Senate, Subcommittee on Military Construction of the Committee on Armed Services, "Military Construction, FY 1975." Reprinted in U.S. Senate, Committee on Armed Services, Hearing, Disapprove Construction Projects on the Island of Diego Garcia, 94th Congress, 1st Session, Washington, D.C., Government Printing Office, 1975, p. 36.

is simply to stand off an equivalent U.S. presence, the prospect for a mutually agreed arms control formula would seem significantly brighter.

OPERATIONALIZATION OF SOVIET MARITIME BEHAVIOR

3.7 For the purpose of this report, Soviet maritime activities were broken down according to their naval and merchant marine components, with the latter excluding the Soviet Union's extensive ocean-going fishing fleet.

3.8 The annual number of Soviet naval and merchant marine port calls per host country, regardless of deadweight tonnages or the number of ship-days in port, was taken as a suitable indicator of Moscow's maritime interest in particular countries.

3.9 The use of aggregate numbers of foreign port calls as one valid measure of Soviet maritime activity is widely accepted. A recent report prepared by the Congressional Research Service for the Senate Subcommittee on the Near East and South Asia, commented: "No matter how the figures are compiled, port calls clearly are an important part of Moscow's Indian Ocean policy." It added that it "is true that port calls rarely create ties, but they can cement them, if mutual confidence is present and perceived interests converge." ^{4/} (Emphasis in the original.)

^{4/} Foreign Affairs Division, Congressional Research Service, Library of Congress, Means of Measuring Naval Power With Special Reference to U.S. and Soviet Activities in the Indian Ocean. Report prepared for the U.S. Senate, Committee on Foreign Affairs, Subcommittee on the Near East

3.10 In an article in Sea Power magazine, Capt. Ronald Kennedy confirmed the relevance of naval activity as a manifest measure of the Soviet interest abroad: "Naval surface combatant ships are simply an effective indicator--and an internationally recognized one--of a major power's continuous or periodic special interest in a region, alliance, sea lane, or of its capabilities and intent in a specific political or military crisis." ^{5/}

3.11 It is recognized that the frequency of port calls is only one of several measures that are relevant to Soviet maritime behavior; port-days, deadweight tonnage, and ship types are additional parameters that ought to be considered in a more extensive examination.

OPERATIONALIZATION OF SOVIET FOREIGN POLICY IN THE THIRD WORLD

3.12 Eight different manifestations of Soviet external involvement were used to achieve an empirical measure of the scope and character of Soviet foreign policy toward the developing nations. The manifestations are:

- Dollar value of Soviet imports

and South Asia, 93d Congress, 2d Session, Washington, D.C., Government Printing Office, 1975, pp. 4-5. Barry M. Blechman apparently believes that naval port calls do create mutual ties and mentioned how the May 1971 visit of a Soviet warship to Sierra Leone apparently was used to legitimize a new regime. See The Changing Soviet Navy, Washington, D.C., The Brookings Institution, 1973, p. 24.

^{5/} Capt. Ronald W. Kennedy, USN, "A Powerful Soviet Navy--Why?" Sea Power, Vol. 17, No. 3, July 1974, p. 11.

- Dollar value of Soviet exports
- Dollar value of Soviet economic aid disbursements (drawings)
- Number of Soviet technical advisers abroad
- Number of foreign academic students and technical trainees receiving instruction in the Soviet Union
- Dollar value of Soviet security assistance deliveries (arms aid)
- Dollar value of Soviet arms sales deliveries
- Number of Soviet military personnel stationed abroad.

3.13 The first two variables (imports and exports) were chosen as representative indicators of the Soviet economic interest in the developing nations. The next three indicators (economic aid, technical advisers, and student training) were believed to be adequate reflections of the Soviet political interest. Finally, the delivered values of Soviet security assistance and arms sales plus overseas military deployments (primarily advisers and training missions) were selected to encompass the Soviet military-strategic stake in the Third World.

3.14 Four years of data, from 1970 through 1973, were available for analysis across 107 developing countries. Excluded from the examination were the countries without a coastline.

IV. FINDINGS

GENERAL

4.1 This section summarizes the statistical relationships that were obtained from the product-moment correlation of the 10 empirical measures of Soviet external involvement in the Third World.

STATISTICAL RESULTS AND SUBSTANTIVE INTERPRETATION

4.2 Tables 4.1 through 4.4 display the product-moment coefficients that were computed to discover the aggregate statistical relationships that exist among the 10 indicators (including naval and merchant marine) of Soviet external involvement throughout the Third World for the years 1970 through 1973. In general terms, the greater the (positive) value of the coefficient, the closer the relationship between two variables. Thus, a coefficient of 0.60, for example, signifies that 36% $[(0.60)^2 \times 100]$ of the value of a country on one variable may be explained (predicted) from its value on the associated variable.

4.3 Interpretation of the correlation matrices will focus exclusively on the evidence pertaining to Soviet naval and merchant marine activity. The reader may draw conclusions on the other data associations that are shown in the arrays.

TABLE 4.1
CORRELATION MATRIX FOR SOVIET EXTERNAL INVOLVEMENT DATA IN 1970
(N = 107)

Variables	Variables									
	1	2	3	4	5	6	7	8	9	10
1. Navy calls	1.00	0.32	0.08	0.16	0.37	0.42	0.23	0.29	0.09	0.43
2. Economic aid	--	1.00	0.29	0.38	0.36	0.83	0.49	0.51	0.31	0.46
3. Arms aid	--	--	1.00	0.95	0.11	0.20	0.70	0.46	1.00	0.72
4. Arms sales	--	--	--	1.00	0.20	0.26	0.83	0.65	0.95	0.80
5. Foreign students	--	--	--	--	1.00	0.51	0.20	0.30	0.10	0.29
6. Advisers	--	--	--	--	--	1.00	0.37	0.48	0.22	0.41
7. Imports	--	--	--	--	--	--	1.00	0.89	0.71	0.82
8. Exports	--	--	--	--	--	--	--	1.00	0.48	0.71
9. Military	--	--	--	--	--	--	--	--	1.00	0.73
10. Merchant calls	--	--	--	--	--	--	--	--	--	1.00

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TABLE 4.2
CORRELATION MATRIX FOR SOVIET EXTERNAL INVOLVEMENT DATA IN 1971
(N = 107)

Variables	Variables									
	1	2	3	4	5	6	7	8	9	10
1. Navy calls	1.00	0.52	0.97	0.53	0.33	0.25	0.71	0.63	0.99	0.93
2. Economic aid	--	1.00	0.54	0.82	0.49	0.81	0.66	0.67	0.52	0.59
3. Arms aid	--	--	1.00	0.56	0.37	0.29	0.71	0.64	0.98	0.92
4. Arms sales	--	--	--	1.00	0.42	0.54	0.84	0.76	0.53	0.65
5. Foreign students	--	--	--	--	1.00	0.58	0.38	0.42	0.31	0.39
6. Advisers	--	--	--	--	--	1.00	0.36	0.47	0.22	0.31
7. Imports	--	--	--	--	--	--	1.00	0.89	0.72	0.83
8. Exports	--	--	--	--	--	--	--	1.00	0.65	0.77
9. Military	--	--	--	--	--	--	--	--	1.00	0.92
10. Merchant calls	--	--	--	--	--	--	--	--	--	1.00

P R E S E A R C H I N C O R P O R A T E D

TABLE 4.3
CORRELATION MATRIX FOR SOVIET EXTERNAL INVOLVEMENT DATA IN 1972
(N = 107)

Variables	Variables									
	1	2	3	4	5	6	7	8	9	10
1. Navy calls	1.00	0.36	0.15	0.17	0.31	0.29	0.04	0.06	0.14	0.14
2. Economic aid	--	1.00	0.59	0.62	0.33	0.68	0.48	0.51	0.64	0.57
3. Arms aid	--	--	1.00	0.68	0.42	0.36	0.58	0.67	0.92	0.88
4. Arms sales	--	--	--	1.00	0.51	0.62	0.81	0.76	0.54	0.68
5. Foreign students	--	--	--	--	1.00	0.58	0.33	0.40	0.32	0.40
6. Advisers	--	--	--	--	--	1.00	0.35	0.42	0.26	0.34
7. Imports	--	--	--	--	--	--	1.00	0.91	0.61	0.76
8. Exports	--	--	--	--	--	--	--	1.00	0.68	0.79
9. Military	--	--	--	--	--	--	--	--	1.00	0.89
10. Merchant calls	--	--	--	--	--	--	--	--	--	1.00

TABLE 4.4
CORRELATION MATRIX FOR SOVIET EXTERNAL INVOLVEMENT DATA IN 1973
(N = 107)

Variables	Variables									
	1	2	3	4	5	6	7	8	9	10
1. Navy calls	1.00	0.60	0.07	0.15	0.25	0.38	0.02	-0.01	0.27	0.23
2. Economic aid	--	1.00	0.51	0.53	0.50	0.79	0.29	0.44	0.54	0.53
3. Arms aid	--	--	1.00	0.49	0.33	0.41	-0.03	0.08	0.55	0.53
4. Arms sales	--	--	--	1.00	0.48	0.63	0.25	0.29	0.36	0.69
5. Foreign students	--	--	--	--	1.00	0.74	0.22	0.23	0.55	0.46
6. Advisers	--	--	--	--	--	1.00	0.47	0.63	0.74	0.63
7. Imports	--	--	--	--	--	--	1.00	0.57	0.19	0.81
8. Exports	--	--	--	--	--	--	--	1.00	0.37	0.80
9. Military	--	--	--	--	--	--	--	--	1.00	0.42
10. Merchant calls	--	--	--	--	--	--	--	--	--	1.00

4.4 The initial question to be examined in the analysis was the relationship between the geographic pattern of Soviet naval port calls and the scope of Moscow's economic and politico-strategic external involvement. The statistics in Tables 4.1 through 4.4 indicate that, on a worldwide basis and with the pronounced exception of the year 1971, no notable relationship appears to exist between the geographic allocation of Soviet naval port visits and the other nine discrete manifestations of Soviet external involvement. A number of tentative conclusions may be drawn accordingly. First of all, the statistical nonrelationship between naval port visit activity and such variables as security assistance, arms sales, and economic aid suggest that, on an aggregate worldwide basis, the Soviet navy is not used in a deliberate presence role in support of allies, clients, or friends. This conclusion is based on the premise that a systematic Soviet policy of using deployed naval power to symbolize the Russian commitment to Third World allies and friends would be reflected in a strong, positive relationship between the frequency of Soviet out-of-area naval port visits and the size of its military and economic aid investment abroad. At the same time, it should be noted that the absence of this relationship does not necessarily uphold the claim that Soviet naval deployments have been basically imitative of the U.S. Testing this proposition would require additional information on the chronology, port call pattern, and force characteristics of U.S. naval deployments.

4.5 Tables 4.1 through 4.4 also disclose that there is no relationship between the frequency and worldwide distribution of Soviet naval and merchant maritime port activity. This

finding seems to support the view that on a worldwide basis, the Soviet Union does not use its naval strength as a protective umbrella over its ocean-borne cargo traffic.

4.6 As pointed out, the statistical results for 1971 represent a significant deviation from the adjoining years studied. Unlike 1970, 1972, and 1973, very strong positive relationships are evident between naval port visits and economic and politico-strategic activities. This discrepancy from the remainder of the data strongly suggests a statistical "accident." Further examination seems warranted, however.

4.7 The statistical relationship that was uncovered between the port call pattern of the Soviet merchant marine and the other tools of Soviet foreign policy did not contain unusual surprises. As expected, the frequency of port visits is strongly related to the dollar value of Soviet imports and exports. In addition, a strong, positive relationship prevailed between merchant marine port call activity and the flow of Soviet security assistance and arms sales, thus confirming the important role of the Soviet ocean-going merchant marine in supplying and sustaining Moscow's arms recipients.

4.8 Related to the merchant marine-arms export nexus is the positive correlation between the number of Soviet military personnel stationed in the Third World and the frequency of foreign port visits. However, statistically, this connection is probably spurious, since it is reasonable to expect a linear relationship to exist between the volume of arms exports and the number of advisory and training personnel that accompany it (as is indeed indicated by the cross-coefficients

between arms aid/sales and military). The statistical association between arms aid and the size of the in-country Soviet military presence is consistently higher than between arms sales and Soviet military personnel. The donation of military equipment may tend to strengthen the Soviet Union's opportunity for inserting its military personnel in the recipient countries.

4.9 The delivery of economic assistance appears to be another important function of the Soviet merchant marine, since correlation coefficients range between a low of 0.46 in 1970 and a high of 0.59 in 1971. Again, this is not an altogether surprising discovery, since it is known that Soviet development aid is commonly extended in the form of "tied loans," i.e., loans in which the borrowing country is required to spend the proceeds exclusively in the donor country. Machinery, construction materials, and the services of Soviet engineers are typically the kinds of commodities that the aided nation is compelled to procure (usually at a higher than local cost) in the Soviet Union and to ship home on board Soviet flag merchant vessels.

REGIONAL VARIATIONS

4.10 The next step in the analysis was to investigate the possibility of regional differences in Soviet maritime behavior. The 107 countries in the study were reorganized into three geographic regions, including the Indian Ocean littoral, West Africa, and the Middle East and North Africa (which, in turn, included the Persian Gulf Area).

4.11 A total of 20 developing countries were included in the Middle East-North Africa region: Syria, Lebanon, Egypt, Libya, Tunisia, Algeria, Morocco, Cyprus, Malta, Iran, Iraq, Kuwait, Saudi Arabia, Oman, the United Arab Emirates, the People's Democratic Republic of (South) Yemen, the (North) Yemen Arab Republic, Sudan, Ethiopia, and Somalia. The 18 countries included in the Indian Ocean littoral were: South Africa, Madagascar, Mauritius, Tanzania, Kenya, Somalia, the People's Democratic Republic of Yemen, Oman, Iran, Pakistan, India, Sri Lanka, Bangladesh, Burma, Thailand, Malaysia, Singapore, and Indonesia. The following 17 countries were aggregated into the West African region: Morocco, Mauritania, Senegal, Gambia, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Dahomey, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, and Zaire.

4.12 Tables 4.5 through 4.7 display the resulting regional product-moment correlations for the frequency of Soviet naval and merchant maritime port visits for the period 1970-1973. Comparison of the three tables across time reveal a number of interesting regional variations between the observed deployment of Soviet maritime resources and Moscow's manifest external involvement.

The Indian Ocean

4.13 The statistical results for Soviet maritime activity in the Indian Ocean duplicated the lack of a demonstrable relationship between naval and merchant ship port call activity that was found to characterize Soviet worldwide behavior. Apparently the Soviet Union does not perceive its Indian Ocean merchant marine traffic sufficiently important

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TABLE 4.5

CORRELATION COEFFICIENTS FOR SOVIET NAVAL
 AND MERCHANT MARITIME PORT CALL ACTIVITY
 AND EXTERNAL INVOLVEMENT ALONG INDIAN
 OCEAN FROM 1970 to 1973
 (N = 18)

Variables	Year			
	1970	1971	1972	1973
Navy Calls				
Navy calls	1.00	1.00	1.00	1.00
Economic aid	-0.02	-0.06	0.34	0.66
Arms aid	0.07	0.11	0.09	0.03
Arms sales	0.16	-0.01	-0.07	0.02
Foreign students	0.12	0.32	0.22	0.44
Advisers	0.01	0.01	-0.04	0.38
Imports	0.17	0.01	-0.07	-0.05
Exports	0.17	0.01	-0.06	-0.11
Military	0.42	0.60	0.75	0.22
Merchant calls	0.26	0.19	0.04	0.14
Merchant Calls				
Navy calls	0.26	0.19	0.04	0.14
Economic aid	0.21	0.26	0.09	0.34
Arms aid	0.06	0.16	0.21	0.26
Arms sales	0.64	0.53	0.66	0.54
Foreign students	0.07	0.12	0.31	0.26
Advisers	0.24	0.23	0.20	0.53
Imports	0.77	0.71	0.74	0.78
Exports	0.70	0.66	0.74	0.46
Military	0.25	0.26	0.18	0.35
Merchant calls	1.00	1.00	1.00	1.00

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TABLE 4.6
 CORRELATION COEFFICIENTS FOR SOVIET NAVAL
 AND MERCHANT MARITIME PORT CALL ACTIVITY
 AND EXTERNAL INVOLVEMENT ALONG WEST
 AFRICA FROM 1970 to 1973
 (N = 17)

Variables	Year			
	1970	1971	1972	1973
Navy Calls				
Navy calls	1.00	1.00	1.00	1.00
Economic aid	0.77	0.77	0.96	1.00
Arms aid	0.77	1.00	0.98	1.00
Arms sales	0.21	0.64	0.98	0.99
Foreign students	0.23	0.02	0.20	0.11
Advisers	0.59	0.92	0.88	0.92
Imports	-0.18	-0.15	-0.12	-0.09
Exports	-0.06	-0.12	-0.14	-0.18
Military	0.63	0.69	0.79	0.90
Merchant calls	0.60	0.48	0.49	0.36
Merchant Calls				
Navy calls	0.60	0.48	0.49	0.36
Economic aid	0.40	0.30	0.45	0.34
Arms aid	0.40	0.46	0.41	0.34
Arms sales	0.35	0.16	0.41	0.31
Foreign students	0.42	0.42	0.21	0.39
Advisers	0.33	0.49	0.41	0.46
Imports	0.44	0.36	0.39	0.37
Exports	0.59	0.46	0.32	0.73
Military	0.46	0.61	0.39	0.48
Merchant calls	1.00	1.00	1.00	1.00

TABLE 4.7

CORRELATION COEFFICIENTS FOR SOVIET NAVAL
 AND MERCHANT MARITIME PORT CALL ACTIVITY
 AND EXTERNAL INVOLVEMENT IN MIDDLE EAST
 AND NORTH AFRICA FROM 1970 to 1973
 (N = 20)

Variables	Year			
	1970	1971	1972	1973
Navy Calls				
Navy calls	1.00	1.00	1.00	1.00
Economic aid	0.31	0.55	0.22	0.65
Arms aid	0.06	0.99	0.22	0.41
Arms sales	0.11	0.73	0.64	0.87
Foreign students	0.50	0.41	0.76	0.76
Advisers	0.53	0.18	0.63	0.74
Imports	0.15	0.99	0.64	0.65
Exports	0.19	0.82	0.60	0.62
Military	0.06	1.00	0.05	0.44
Merchant calls	0.40	0.98	0.81	0.83
Merchant Calls				
Navy calls	0.40	0.98	0.81	0.83
Economic aid	0.28	0.53	0.61	0.72
Arms aid	0.88	0.98	0.94	0.70
Arms sales	0.89	0.73	0.69	0.78
Foreign students	0.20	0.43	0.46	0.64
Advisers	0.27	0.19	0.21	0.62
Imports	0.91	0.99	0.98	0.95
Exports	0.80	0.84	0.89	0.84
Military	0.88	0.98	0.96	0.44
Merchant calls	1.00	1.00	1.00	1.00

to warrant its extensive protection by naval power. Alternatively, Moscow simply may not yet have the ability to project a credible sea control force into the Indian Ocean. If, as some U.S. sources have claimed, the Soviet naval presence in the Indian Ocean is related to Soviet commercial shipping in the region, the data indicate that this relationship is a tenuous one at best. ^{1/}

4.14 As it is on a worldwide basis, in the Indian Ocean the shipment of Soviet foreign arms sales and nonlethal commodities (i.e., imports and exports) is closely tied to its merchant marine traffic. The Indian Ocean pattern deviates from the worldwide results, however, by the apparent lack of a significant association between the volume of Soviet economic aid and the flow of Soviet cargo vessels. Conceivably, this distinction is due, in part, to the fact that the most important Soviet aid recipients along the Indian Ocean have either a common border (e.g., Iran and Pakistan) or are in relatively close proximity to the Soviet Union (e.g., India and Iraq), thus permitting transportation by either road or air.

4.15 The fact that no significant relationship was found to exist between Soviet naval port visits and Soviet arms and economic aid programs weakens the proposition that Soviet naval strength in the Indian Ocean is used systematically to underwrite Moscow's commitment to its regional clients. No consistent motivation appears to drive Soviet naval behavior in the Indian Ocean, i.e., nonclient states are as likely to host Soviet warships as are close allies.

^{1/} Sec, for example, Center for Defense Information, "The Indian Ocean: A New Naval Arms Race?" The Defense Monitor, Vol. 3, No. 3, April 1974, p. 4.

4.16 The apparent absence of patterned regularity in Soviet port call activity in the Indian Ocean could be interpreted as support for CIA director Colby's thesis that the Soviet naval profile in the area is basically related to U.S. activity there, rather than being the product of independent Soviet policy initiative. ^{2/}

West Africa

4.17 The pattern of Soviet maritime behavior along the West African coast is quite distinct from both its worldwide and Indian Ocean counterparts. As shown in Table 4.6, the locations of naval port calls and the areas receiving economic and military assistance are closely associated. The port calls' close statistical connection with the numerical strength of Soviet economic and military advisory contingents in the region further emphasizes the point. Given these findings, it might be concluded that in West Africa, unlike the Indian Ocean, the Soviet Union appears to be employing its naval strength in a systematic presence role to support allies and to deter potential adversaries. The recent dispatch of two Soviet surface naval combatants off the coast of Angola is specific and tangible evidence of the Soviet use of naval "side bets" to underscore a commitment to a "protege."

4.18 Curiously, the statistical association between naval port visits and arms and economic aid is visibly stronger than the association between aid and Soviet merchant marine port activity. It appears as if the Soviet Union almost prefers to use its Navy rather than its civilian cargo fleet

^{2/} U.S. Senate, Committee on Armed Services, op. cit.

to deliver West African assistance. Further investigation in this area is closely required.

Middle East and North Africa

4.19 A very strong, positive link appears to have developed between the patterns of Soviet naval and merchant maritime port calls in the Middle East and North Africa region. This finding differs significantly from both the worldwide and the two regional patterns examined previously. It provides some very tentative evidence that in the case of the strategically vital areas of the Mediterranean Basin and the Persian Gulf, the Soviet Union may have assumed a de facto sea control posture to protect its extensive merchant shipping. The moderate to very strong association between naval port call activity and the flow of Soviet trade (imports and exports) seems to further prove this assumption. It should be noted that the Mediterranean Sea, in particular, is the one area where the Soviet Union has both the naval resources and the economic motivation to use its navy to protect its civilian shipping. The bulk of the Soviet trade with the Third World is conducted with the Arab countries, from which the import of petroleum has become increasingly important to the Soviet economy. An added consideration that may have stimulated a Soviet decision to deliberately use the Mediterranean "eskadra" to protect local merchant marine traffic is the unusually heavy concentration of U.S. naval and associated air power in the area. Given the highly volatile nature of the region and the Soviet Union's apparent resolve to maintain a strong political and military relationship with a number of the Arab states, the Soviet leadership may have realized that without an armed presence, its arms supply lines would

be vulnerable at all times to the threat of U.S. naval harassment and, possibly, to forceful interdiction in the event of a local conflict. Certainly, the Cuban experience in 1962 must have convinced Soviet decision-makers of the tenuousness of an unprotected sea line of communications to a beleaguered ally.

4.20 The strong positive correlation between the Soviet Union's frequency of naval port visits and the flow and volume of its Middle East-North Africa arms sales indicates that, as in West Africa, the Soviet Union uses naval presence as an important means to demonstrate support and commitment to local states. The typically strong relationship between Soviet trade flows and merchant marine traffic is evident in the Middle East and North Africa. The 0.99 coefficient between Soviet imports and merchant marine visits in 1971, for example, denotes that 98% $[(0.99)^2 \times 100]$ of the variation of the Middle East and North African countries on these two characteristics is the same.

4.21 The important role of the Soviet merchant marine in delivering economic and military assistance is evident in Table 4.7. The 0.77 coefficient for Soviet arms aid and merchant marine port calls in 1973, for example, implies that 59% $[(0.77)^2 \times 100]$ of a regional country's Soviet arms imports (in the form of gifts) can be "explained" from knowledge of Soviet merchant marine traffic in its ports in that year.

SUMMARY OF FINDINGS

4.22 The relationship between Soviet maritime activity and the broader objectives of Soviet foreign policy is characterized by some important regional variations. Linkages that

are not apparent on a global scale take on a distinct perspective when examined on a more limited, regional level. Thus, whereas no discernible association can be established between the pattern of Soviet naval port visits and the flow of Soviet aid and trade on a system-wide level, discrete connections are confirmed in two of three geographic regions that were examined separately: West Africa and the Middle East-North Africa region. Soviet naval and merchant maritime behavior along the Indian Ocean littoral, however, displays primarily the same lack of discrete policy relatedness that is found to typify its worldwide pattern.

4.23 The empirical evidence indicates the use of the Soviet navy as a presence force in both West Africa and the Middle East and North Africa region (but not in the Indian Ocean); it is only in the second region that an affirmative association appears between the flow of Soviet naval and merchant marine vessels. This finding is believed to be of sufficient import to question the standard Western denial of Soviet interest in the naval protection of its merchant fleet.

POLICY IMPLICATIONS

4.24 The regional character of the two principal Soviet naval roles that have been examined--presence and sea control--is indicative of the limiting impact that even such a basic consideration as distance apparently still has on the kinds of functions the Soviet navy can perform effectively. Thus, in the area closest to the Soviet Union--the Middle East and North Africa--the Soviet navy appears to be able to meet simultaneously the material requirements for a presence role as well as for limited sea control. In the next nearest

region, West Africa, Soviet naval activities are limited primarily to a presence mission and do not yet include an evident attempt to extend protection to Soviet merchant ship traffic. Finally, discrete missions appear to be lacking altogether in the third and most distant region considered--the Indian Ocean. The available evidence seems to reaffirm the intimate relationship between capabilities and the scope of a nation's foreign policy objectives.

4.25 As stated earlier, the Soviet use of sea power in a presence role can be seen as evidence of a significant revision of the Soviet perception of its role in the Third World. It may signify that the Soviet Union has ceased to view external involvement beyond its immediate borders as primarily an opportunistic and negative activity to be accomplished with large doses of diplomatic bluff and aid and designed principally to offset adjacent areas of U.S. power and influence. Thus, until the early 1960s, the prevailing Western consideration of Soviet overseas presence, as reflected, for instance, in a 1965 study of Soviet military aid policy, was that through "the establishment of its military presence in recipient countries, the Soviet Union sought to counter Western influence and to undermine Western strategic and economic interests in these regions." ^{3/}

4.26 The demonstrative presence of Soviet military strength, on the other hand, indicates, first, that the Soviet Union has recognized the limitations of its diplomacy of bluff and

^{3/} Atlantic Research Corporation, The Soviet Military Aid Program as a Reflection of Soviet Objectives, Washington, D.C., 24 June 1965, p. 18.

financial reward and, secondly, that the extension of Soviet interests has become an important, positive policy objective that is independent of similar U.S. behavior. The implications of this shift are not altogether clear. In theory, the Soviet pursuit of its own set of interests implies an attenuation of U.S.-Soviet competition; at the same time, however, growing Soviet confidence in the political utility and success of naval presence may raise the likelihood of U.S.-Soviet confrontations at sea from which neither can withdraw.

4.27 The study's inability to empirically confirm the Soviet use of naval power in the Indian Ocean as either an instrument of presence or as a protective device for Russian merchant shipping strengthens the argument that Soviet naval behavior in the area has probably been motivated by opportunism and a perceived necessity to counteract a U.S. presence, rather than by a desire to further discrete Soviet regional interests. If true, this occurrence is probably indicative of the limited Soviet capability to maintain all but token forces in the most distant areas. As Soviet logistical resources improve, there will be a greater opportunity to integrate naval strength into a cohesive Soviet Indian Ocean policy. This would mean, in turn, that the possibility of some form of mutually agreed on, regional naval arms control will probably be lowered significantly.